

NATIONAL

amateur radio

CONVENTION

SAN FRANCISCO

JULY 6-7-8, 1956



CONDUCTED BY THE CONVENTION COMMITTEE OF THE CENTRAL CALIFORNIA RADIO CLUBS, INC.

. . . welcome

to California's first National ARRL Convention.

From the time of announcement this 8th National has received the complete support of amateurs in it's own city and.....as the news spread.....from hundreds of amateurs everywhere in California. Now...full bloom with over 1300 pre-registrations before the doors even open...the same wonderful support has become national in scope.

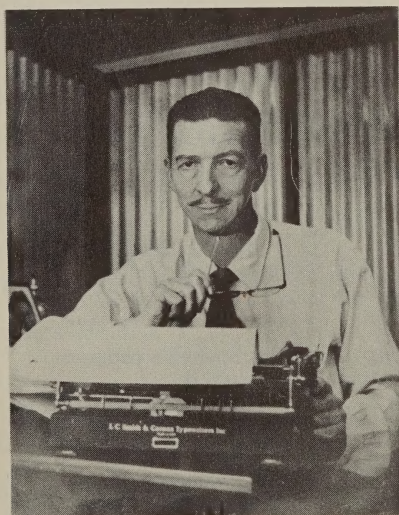
So then.....to every guest.....a warm, personal welcome!

To my grand committee, business men and housewives, who, without thought of personal gain and with almost complete sacrifice of leisure time, contributed so much...

To the jobbers and manufacturers, local, regional and national whose support and cooperation has been almost without precedent.....

You have inspired a tired old war horse to lift his head proudly and, once again, to answer the call to battle.

. . . thank you



Clayton F. Bane
General Chairman: W6WJB

. . . . a lot of midnight sessions.



Seated, L-R: W6GPB, W6BYB,
W6SR, W6DUB, W6TT, W6GGC,
Rose Buckley, W6PCN.
Standing, L-R: W6CBE,
W6WB, W6DOT.

EXECUTIVE COMMITTEE

General Chairman: Clayton F. Bane W6WB	ARRL Program - Activities: Wally Buckley W6GGC
Ladies Chairman: Peggy Detsch W6PCN	Guest reservations: Rose Buckley
Convention Meetings - Activities: Arthur Fonseca W6SR	Convention Housing, exhibits - meetings. (Civic Auditorium) Gene Pera W6DOT
Legal: James Shovlin W6WQX	Banquet - Entertainment: (Convention activities, Hotel Whitcomb) Victor N. (Zack) Zackariah
Financial: Rose Pera	Sales: Souvenir Program - Exhibits - Tickets: Elvin Feige W6TT, Clayton Bane W6WB
Advertising - Publicity; Souvenir program. Clayton F. Bane W6WB	Prizes: Ron Panton W6CBE,

CHAIRMEN

RTTY: Roger Wixson W6FDJ	MILITARY EXHIBITS: Jack Detsch W6GCV
MOBILE: Mario Chirone W6DUB	TVI: Dick Czeikowitz W6ATO
VHF: Bob Melvin W6VSV	DX: John Mayes W6BYB, Joe Horvath W6GPB
NOVICE: John Reinhartz K6BJ	SSB: Art Fonseca W6SR
MOBILE JUDGING: Warren Sichel W6EJY .	GOLF: Peter Folini W6PYH

PROGRAM. . . .

FRIDAY . . . JULY 6

10 am to 10 pm: REGISTRATION. Lobby, Whitcomb Hotel.

EXHIBITS: Open 1 pm, close 6 pm. LARKIN HALL, Civic Auditorium.

The exhibits in the Civic Auditorium have been planned as an integrated part of the convention program. Scheduled activities for Friday afternoon have been limited since this period represents an ideal time to enjoy all exhibits without concern about missing other scheduled meetings.

TOURS: Eitel-McCullough plant tour. (Two sections, 200 persons)

FIRST SECTION: Chartered Greyhound buses start loading at 12:45 pm in front of Hotel Whitcomb. 100 persons maximum/trip.

SECOND SECTION: Greyhound buses start loading at 1:45 pm in front of Hotel Whitcomb. 100 persons maximum/trip.

OTHER TOURS—SIDE TRIPS: Check bulletin board, hotel lobby.

HIDDEN TRANSMITTER HUNTS: Early Friday evening.

Chairman: Warren Sichel, W6EJY.

Be sure to obtain printed sheets giving times, meeting place and complete details. These sheets are available at registration desk.

7 pm. Civic Auditorium.

Convention convenes in main section of auditorium and is opened officially by General Chairman, Clayton Bane, W6WB. Subsequent meeting conducted by Wally Buckley, W6GGC, (SCM S.F.) ARRL Activities Chairman.

Many interesting and diversified subjects will be discussed briefly at this opening meeting. Those scheduled for brief talks include: ARRL President Goodwin L. Dosland, ARRL General Manager and QST editor, A. L. Budlong, ARRL Vice-President and Communications Manager, E. F. Handy. Several other QST staff members will also be present.

Representatives from Army, Navy, FCC, FCDA and Voice of America will be present.

ARRL MERIT AWARD to W2UK and W4HHK will be made by President Dosland and General Manager Budlong.

SEVERAL PRIZE DRAWINGS WILL BE HELD DURING MEETING.

Meeting will adjourn at approximately 10 pm and men will rejoin the ladies at the Whitcomb Hotel for party-dance.

10 pm to 1 am. Hotel Whitcomb, Crystal Ball Room.

Dancing to the music of Dick Foy's orchestra and entertainment including:

Johnny Molinari, (Radio City-N.Y.)
"Wizard of the keys."

George Lee & Co. (Forbidden City-S.F.)
"Geni of balance."

Joe Kealoa's Tradewinds (Tonga Room)
Hawaiian string trio.

Burns Twins and Evelyn (from Guy Lombardo's show).
Musical comedy — dancing.

MIDNIGHT: Hotel Whitcomb. Corinthian Room.

Wouff Hong Initiation. Amateur Radio's Secret Order.
Presented by the H.A.M.S. club of San Francisco.

SATURDAY . . JULY 7

9:15 am. Civic Auditorium.

Radio Teletype Meeting. Roger Wixson W6FDJ, Chairman.

Speakers: Merrill Swan W6AEE, "RTTY history and demonstration."

Roger Bunce W6EFT, Robert Dollar Co. "Terminal units and frequency shift keying."

9:15 am. Civic Auditorium.

Novice meeting. Open only to novices, technicians or to those working toward these classes of licenses.

Chairman-speaker: John Reinhartz K6BJ, Eitel McCullough. An excellent, understandable meeting at novice level. Special novice-only prizes and awards including FIVE NC-88 receivers.

9:15 Civic Auditorium.

Single sideband meeting. Acting chairman, Art Fonseca W6SR.

Speakers: Norm McLaughlin W6GEG. "Grounded-grid amplifiers."

Bob Meidke, Collins Radio Co. "Modern Communication Techniques, or Smoke Signals are Bygone."

11 am. Civic Auditorium.

"The amateur and the International Geo-Physical Year."

Speaker: Mr. Allen Peterson W6POH, Assistant Professor, Stanford University.

An important discussion bearing on new propagation information of high interest to all radio amateurs. Illustrated with slides and 16 mm movies.

11:45 Adjourn for lunch.

1:00 pm. Civic Auditorium.

Speaker: Andrew A. Andros, World Radio Laboratories.

"The application of parallel resonant trap circuits in multi-band antenna systems."

A brief interesting talk stressing practical aspects of the currently highly popular "Three band" antenna.

1:45 pm. Civic Auditorium.

"Some aspects of transmission lines." Illustrated with slides.

Speaker: Byron Goodman W1DX, assistant technical editor, QST.

2:15 pm. Civic Auditorium.

Television Interference Meeting.

Chairman-speaker: Dick Czeikowitz W6ATO, head of the TVI committee for the San Francisco area.

SATURDAY JULY 7

2:15 Civic Auditorium.

VHF meeting. Chairman, Bob Melvin W6VSV.

Speakers: Frank C. Jones W6AJF.

Ed Tilton W1HDQ, VHF Editor, QST.

Herb Johnson, W6QKI engineer Gonset Co.

4 pm. Civic Auditorium.

"The story of DX." Colorful slides, synchronized tape recording commentaries. The story of DX from its infancy to the present day, "250 countries and up." Temp Campbell W6ELW, presiding.

7:30 pm. Banquet, Civic Auditorium.

Dinner, introduction of honored guests, awards, distribution of "donations" and selection of recipient of pre-registration "traditional incentive."

10:30 pm. Banquet group adjourns to Hotel Whitcomb for Grand Ball.

Dancing to Dick Foy's augmented orchestra, with vocalist.

Dancing and entertainment, George Cerruti Combo.

(From Don Sherwood's TV show, "San Francisco Tonight.")

SUNDAY JULY 8

IMPORTANT NOTE. Those who desire to attend the following scheduled DX and Mobile Breakfasts should definitely purchase tickets in the Whitcomb lobby prior to Saturday evening.

8:00 am. Radio Teletype Breakfast.

Location: Seahorse Restaurant, 60 Market Street.

9 - 10 am., tour through RCA Communications Center, 135 Market St. followed by tour through Press Wireless at Belmont. Check with Chairman Wixson for transportation if not available.

9:00 am. DX Breakfast. Hotel Whitcomb.

Chairmen: John Mayes W6BYB and Joe Horvath W6GPB.

KH6IJ will show slides of Hawaiian amateur activities, also how to run up a big contest score.

A dandy DX quiz by W6BYB deals only with DX. Worthwhile prizes.

ARRL will be represented by Ed Handy W1BDI who may comment briefly on new DX country status.

Other prizes for hams from greatest distance, U.S. and Foreign countries, etc.

9:00 am. Mobile Breakfast. Hotel Whitcomb.

Chairman Mario Chirone W6DUB.

After breakfast speaker, Ray Morrow, Morrow Radio Co.
Subject, "Mobile transmitters."

11:30 am. Mobile judging. Civic Center Plaza.

Chairman: Warren Sichel W6EJY.

Prizes for installations judged first, second and third best.

NOTE: Many other group breakfasts will undoubtedly be scheduled. Consult hotel and auditorium Bulletin Boards for specific details.

LADIES PROGRAM

FRIDAY JULY 6.

3 pm to 5 pm. Hotel Whitcomb, White and Gold Room.
Ladies "get acquainted" coffee hour.

Hostesses: Mrs. Clayton Bane, Mrs. Elvin Feige, Mrs. Thelma Chirone,
Mrs. Arthur Fonseca, Mrs. Evelyn Zackariah.

8 pm to 10 pm. Hotel Whitcomb, Corinthian Room.
"SWOOP" . . . a fantasy.

Esther Given, W6BDE, Kay Mac Gillvray K6HIW, Elsie Bachman.
Surprises . . . special prize drawings.

8 pm to 10 pm. Hotel Whitcomb. Crystal Room.
Teen-agers party. Hostesses: Mrs. Roland Smith,
Raymona Buckley, Diane Zachariah.

10 pm - 1 am Hotel Whitcomb. Crystal Room. Dancing - entertainment.

LADIES PROGRAM

SATURDAY JULY 7

9:45 am. Front of Hotel Whitcomb.

Chartered Greyhound buses leave for trip to the beautiful McLellans Orchid Garden. The party is then transported to the new and highly interesting Stonestown shopping area for lunch at Rickey's Red Chimney Restaurant. After lunch, buses take the party to famous Golden Gate Park and visits to the planetarium and scenic Japanese Tea Garden. Party returns at 4 pm.

11:45 am. Front of Hotel Whitcomb.

Chartered Greyhound buses leave for unique Town House Restaurant. After lunch, buses take group to Golden Gate Park and visits to the Planetarium and Japanese Tea Garden. Return at 4 pm.

1 pm. Hotel Whitcomb, Center Room.

Licensed YL operators luncheon, prizes, special activities.

Veda Letcher W6CEE, MC.

Gertrude Cassady W6FEA.

Eleanor Wilson, W1QON, YL Editor QST Magazine.

Louisa Sando, YL Editor CQ Magazine.

CONVENTION EXHIBITORS

U.S. Army	Booth No. 1
Convention prize display booth	" " 2
Amateur Radio Teletype Exhibit	" " 2A
Western Electric	" " 3
Collins	" " 4-5
Webster Manufacturing Co.	" " 6
U.S. Navy	" " 7-8-9
Hughes Aircraft	" " 10
Telebeam	" " 11
American Radio Relay League	" " 12
Technical Materiel Corp.	" " 13
Gonset Co.	" " 14-15
Eitel-McCullough	" " 16-17
Alpar Mfg. Corp.	" " 18
P & K Electronics	" " 18
Eldico	" " 19
Morrow Radio Mfg. Co.	" " 20
Lakeshore Industries	" " 21
E. F. Johnson Co.	" " 22
World Radio Laboratories	" " 23

The attention of our convention guests is specifically called to the names of the following jobbers and manufacturers whose most generous contributions have added materially to the success of this convention. Please note that the donated equipment is on exhibit in our booth No.2 in the exhibit hall.

Donations that may arrive too late for listing herein will be displayed, with proper credit, in the prize booth.

. . . thank you

ELMAR ELECTRONICS

ZACK RADIO SUPPLY CO.

SAN FRANCISCO RADIO & SUPPLY CO.

VALLEY ELECTRONICS

BOB AND TED HENRY

GONSET CO.

EITEL MC CULLOUGH

WORLD RADIO LABORATORIES

WEBSTER MANUFACTURING CO.

JENNINGS RADIO MANUFACTURING CO.

ALPAR MANUFACTURING CO.

ADVANCE RELAYS

BARKER & WILLIAMSON

PENTA LABORATORIES

MOSELY ELECTRONICS

TELEBEAM INDUSTRIES

ELECTRO VOICE INC.

CENTRAL ELECTRONICS

TECHNICAL MATERIEL CORP.

AMERICAN RADIO RELAY LEAGUE

JOHN MAYES

WALLY BUCKLEY

SAN FRANCISCO RADIO CLUB

MOSELY ELECTRONICS

TELREX

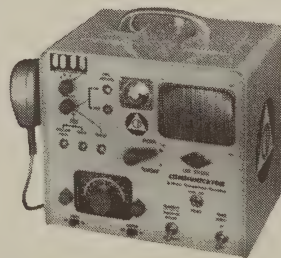
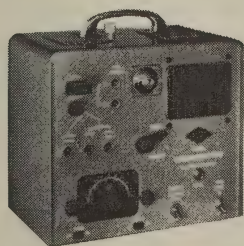


a neat package....

A neat, tidy package, the Gonset Communicator, long ago set the pace for commercial-built VHF amateur and emergency equipment. This practical, resourceful scale-down of a complete VHF station into "Package" form serves as the basis for Gonset's well known Communicator slogan, "Compactness without compromise".

Communicators—"Packages"—for 2 and 6 meters. For ground-to-air. For industrial. For C-D. Now a special new model for C.A.P. Pace setters—winners—all.

Today, thousands of 2 meter Communicators are in use. The demand for the comparatively new, but already performance-proved, 6 meter models increases daily.



2 and 6 meter models.

New models for C.A.P.

Civilian Defense models.

Available RF power amplifiers increase output power ten fold.

GONSET CO. 801 SOUTH MAIN STREET, BURBANK, CALIF.

RCA POWER TUBES

CLASS C POWER AMPLIFIERS AND OSCILLATORS

RCA Type	Class of Service	Max. Plate Ratings			Max. Fre- quency for full Input Mc	Heater (W) Filament	Typical Operating Conditions							
		DC Input Watts	DC Volts	Dissipa- tion Watts			DC Plate Volts	DC Grid- No. 3 Volts	DC Grid- No. 2 Volts	DC Grid- No. 1 Volts	DC Plate Current Ma.	Approx. Driving Power Watts	Approx. Power Output Watts	
TRIODES														
811-A†	CW Phone	260 175	1500 1250	65 45	30	6.3	1500 1250	—	—	-70 -120	173 140	7.1 10	200 135	
812-A†	CW Phone	260 175	1500 1250	65 45	30	6.3	1500 1250	—	—	-120 -115	173 140	6.5 7.6	190 130	
800S‡	CW Phone	300 240	1500 1250	85 75	60	10	1500 1250	—	—	-130 -195	200 190	7.5 9	220 170	
8000‡	CW Phone	750 500	2500 2000	175 125	30	10	2500 2000	—	—	-240 -370	300 250	18 20	575 380	
803-A†	CW Phone	1000 1000	3300 3000	350 250	30	10	3000 3000	—	—	-160 -240	335 335	20 26	800 800	

BEAM POWER TUBES AND PENTODES

5618	CW	7.5	300	5	100	3.0 6.0	300	0	75	-45	25	0.2	5.4
5763‡	CW Phone	17	350	13.5	50	6.0 (H)	350	0	250	-28.5	48.5	0.1	12
6417‡	Same as 5763 except for 12.6-volt heater												
2E24‡	CW Phone	40	600	13.5	9	125	6.3	600	—	195	-50	66	0.21
2E26‡	CW Phone	40	600	13.5	9	125	6.3 (H)	600	—	185	-45	66	0.17
832-A†	CW ^o Phone ^o	50	750	20	15	200	6.3 12.6 (H)	750	—	200	-50	65	0.24
807‡	CW Phone ^o	75	750	30	60	6.3 (H)	750	—	200	-70	60	0.21	
6524‡	CW ^o Phone ^o	85	600	25	100	6.3 (H)	600	—	200	-45	120	0.2	
6146‡	CW Phone ^o	55	500	16.7	60	6.3 (H)	500	—	200	-61	100	0.2	
4X150A‡	CW ^o Phone ^o	250	1250	150	500	6.0 (H)	1250	—	250	-90	200	1.2	
829-B‡	CW ^o Phone ^o	120	750	40	200	6.3 12.6 (H)	750	—	200	-50	160	0.4	
5894‡	CW ^o Phone ^o	120	600	40	250	6.3 12.6 (H)	600	—	250	-80	200	4	
4-65A	CW ^o Phone ^o	345	3000	65	50	6.0	3000	—	250	-100	150	0.6	
4-125A‡	CW ^o Phone ^o	275	2500	45	120	5.0	2500	—	350	-135	110	2.6	
813‡	CW Phone ^o	500	2250	125	30	10	2250	0	400	-155	220	4	
4-250A‡	CW Phone ^o	400	2000	100	120	10	2000	0	350	-175	200	4.3	
5D22	CW ^o Phone ^o	675	3200	165	110	5	3000	—	500	-225	312	2.46	
										-310	225	3.2	

MODULATORS OR RF LINEAR AMPLIFIERS (SINGLE-SIDEBAND)

RCA Type	Class of Service	Max. Plate Ratings			Typical Operating Conditions (Two Tubes, Except Where Shown)							
		DC Volts ■	DC Input Volts ■	DC Plate Volts	DC Grid-No. 2 Volts	DC Grid-No. 1 Volts	Peak AF Grid-No. 1 to Grid-No. 2 Volts	Zero- signal DC Plate Current Ma.	Max- Signal DC Plate Current Ma.	Plate- to- Plate Load Ohms	Approx. Max-Sig. Driving Power Watts	Approx. Max-Sig. Power Output Watts
829-B†	AB ₂ ♦	750	100	600	200	-18	36	40	110	13750	0	44
2E24‡	AB ₂	500	37.5	500	125	-15	82	20	150	9000	0.46	54
2E26‡	AB ₂	500	37.5	500	125	-15	60	22	150	8000	0.36	54
6524‡	AB ₂ ♦	600	85	600	200	-26	76	21	135	11400	0.15	57
4X150A‡	AB ₂ ♦	1250	300	1250	300	-44	100	180	475	5600	0.15	425
807‡	AB ₂	750	90	750	300	-35	96	30	240	7300	0.2	120
6146‡	AB ₂	750	90	750	300	-35	555	15	240	6650	0.3	120
5894‡	B♦	600	120	600	250	-25	53	35	168	8000	0.2	70
811-A†	B	1500	235	1500	—	-4.5	170	32	313	12400	4.4	340
813‡	AB ₁ *	2500	450	2500	750	-95	180	50	290	19000	0	490
810‡	B**	2750	510	2250	—	-60	380	70	450	11600	13	725
8000‡	B**	2750	510	2250	—	-130	560	65	450	12000	7.9	725

Values shown are for Intermittent Commercial and Amateur Service (ICAS), unless otherwise indicated.

†High Perveance Type.

‡Values are for both types.

♦For all applications.

*For beam power tubes and pentodes the values shown are for mu-factor, Grid No. 2 to Grid No. 1.

‡Recommended for all applications because of low output capacitance.

♦Values shown are for Continuous Commercial Service (CCS).

‡All ratings are Absolute Maximum values.

‡Grid No. 3 connected to center tap of filament supply.

‡Audi driving signal fed to Grid No. 2; Grid No. 1 tied to Grid No. 2 through 20,000-ohm, 2-watt resistor.

for every transmitter need...

This chart has been prepared expressly for radio amateurs to show operating conditions and maximum ratings on RCA's wide line of power tubes for amateur transmitter application. High-perveance design on many of these types enables you to get the power you want at lower plate voltages. Conservative ratings assure you long hours of reliable operation.

Whether you are planning high power or low power, CW or 'phone, AM or SSB—you can rely with confidence on RCA Power Tubes. Your RCA Tube Distributor handles the entire line. For additional tube data, write RCA, Commercial Engineering, Section . . . , Harrison, N. J.

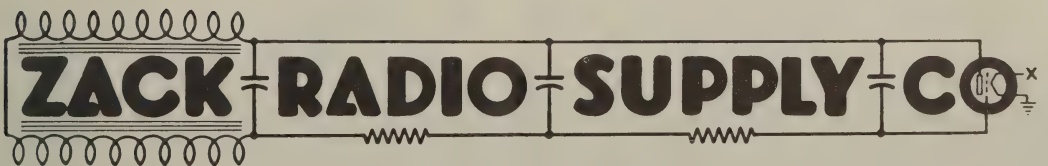
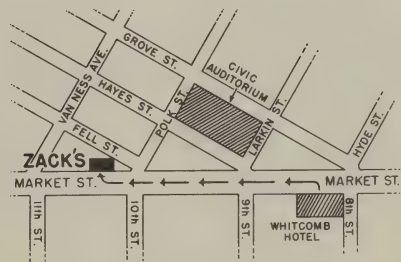


TUBES for AMATEURS

Radio Corporation of America, Harrison, N. J.



Drop in and
exchange your QSL. . . .
or a reasonable facsimile. . .
for one of these perky, red
souvenir hats. Yodeling
privileges with each
hat. . . of course.



San Francisco Store
1424 MARKET STREET.

Palo Alto Store
525 HIGH STREET.

Quality, Style and Beauty



THE ALL NEW COMMUNICATIONS RECEIVER

FEATURING:

- Six bands covering .54 to 31 Mc.—AM, CW, MCW, and FS with appropriate FS converter.
- Accurately calibrated main tuning dial plus auxiliary dial with full Electrical bandspread.
- A ferrite transformer provides accurate antenna matching for 75 ohm unbal. and/or 300 ohm balanced inputs.
- Sensitivity: 1 (one) microvolt or better for 10-1 signal to noise power ratio, 1.5 to 31 Mc. Less than 5 microvolts for .54 to 1.5 Mc.
- Image Ratio: Better than 60 db.
- Selectivity: Variable in 6 steps from 200 cy to 5 KC, 5 crystal and one non-crystal positions.
- Input: 105-125VAC 50/60 cy., approx. 90 Watts—6V.-6A, and 250VDC-.1A.
- Output: 4, 8, 16, 600 ohms, 2 Watts high quality audio—better than 60 db hum level.

- Highly effective noise limiter—Calibrated "S" Meter—Dial locks.
- Specially designed Audio Selectivity control with variable bandwidth.
- Diversity operation is available with the GPR-D. Provisions for external control for HFO, BFO, IFO.
- SSB Coaxial IF output & Audio input.
- Cabinet or rack mounting . . . 52 lbs. . . 20" w. x 10" h. x 15" d. (Cabinet.)

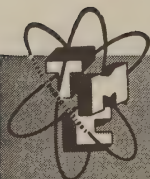
Tube complement:

6AB4 Grounded grid
input RF amp.
6CB6 2nd RF
6AU6 1st converter
6AG5 Oscillator
6BE6 2nd Converter
and Oscil.
6BA6 IF Buffer Amp.

3-6BA6 IF Amplifiers
6AL5 Det./Noise ltr.
6AG5 BFO
12AX7 Avc and Audio Amp.
6V6 Output
OA2 Regulator
5U4G Rectifier

Bulletin 179B for complete details.

Complete receiver—Amateur Net **\$395⁰⁰**
Matching Speaker \$16.00 extra



THE TECHNICAL MATERIEL CORPORATION

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OTTAWA, ONT., CANADA

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on ham equipment from
VALLEY electronic supply company!

We're a Western company that lives up to the Western reputation for square dealing. When you want guaranteed new equipment, certified used equipment or you want to trade — get the final word from Valley!



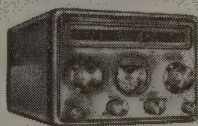
"Bud"
W6YPA

You Command Over 200 Years of Ham Experience! The hams at Valley have been in amateur radio from spark gap to SSB. They'll help you get the final word on the equipment you want or the problems you want solved, so call 'em, phone 'em or write 'em!

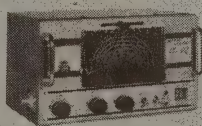
W6OYD
W6QJL
W6KSF
K6DPH
W6YML
W6YPA
K6CRD
W6LTY
KN6JJM
W6VBY
W6VCR



JOHNSON "PACEMAKER"
Amateur Net: \$495.00



GONSET G-66
Amateur Net: \$169.50



MULTI-ELMAC AF-67
Amateur Net: \$177.00

Valley Has All the Equipment! In stock, ready for delivery — Johnson, Hallicrafters, National, Collins, Multi-Elmac, Barker & Williamson, Harvey-Wells, Master Mobile, Gonset. Also certified used equipment.

Trade-ins & Credit! Valley is the final word on trade-ins! Order any piece of equipment you want now for 10% down, balance in up to 2 years.



VALLEY electronic supply company

Two Western Locations

1302 W. Magnolia Blvd., Burbank, Calif.
Phone Victoria 9-4641

17647 Sherman Way, Van Nuys, Calif.
Phone Dickens 2-5143

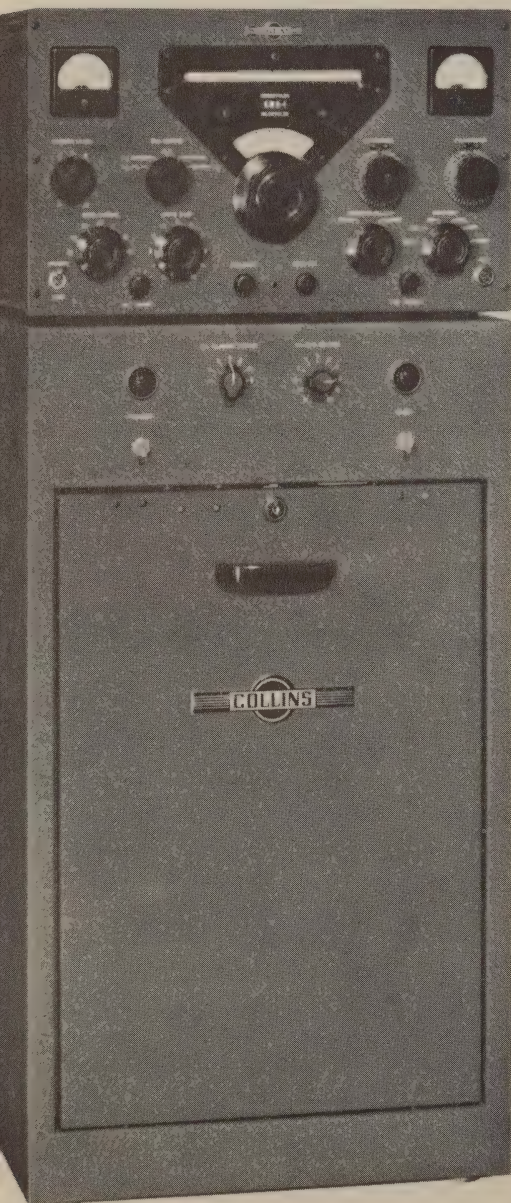
some prices slightly higher west of the Rockies

FREE Novice Classes at Both Stores • W6LTY & W6QJL instructors • 210 Novices Licensed Through Our Classes

FIRST CHOICE

Collins

COMPLETE SSB STATION



COLLINS KWS-1 TRANSMITTER

Unprecedented compactness is achieved without undue crowding. Exciter and RF power amplifier are in a single receiver-size housing which can be placed on the operating desk or mounted on top of the power supply cabinet. Proved circuit applications and components — extremely accurate 70E VFO, Pi-L output network and Collins Mechanical Filter — give you unmatched performance, accuracy and stability in SSB, AM and CW operation.

KWS-1 SPECIFICATIONS

POWER AMPLIFIER INPUT — 1 kw peak envelope power on SSB, 1 kw CW operation. Equivalent to 1 kw on AM when using narrow bandwidth receiver.

R-F OUTPUT IMPEDANCE — 52 ohms.

MAXIMUM PERMISSIBLE STANDING WAVE RATIO — 2.5 to 1.

FREQUENCY RANGE — 80, 40, 20, 15, 11, 10 meters — 3 to 30 mc.

EMISSION — SSB, AM carrier plus one sideband, CW.

FREQUENCY CONTROL — 70E-23 Master Oscillator.

HARMONIC AND SPURIOUS RADIATION — (Other than 3rd order distortion products.) Intra-channel radiation is at least 50 db down. All spurious radiation at least 40 db down at output of exciter. Second harmonic at least 40 db down; all other harmonics at least 60 db down.

FREQUENCY STABILITY — Warm-up: After 15 minutes warm-up, within 300 cps of starting frequency. Dial Accuracy: 300 cps after calibration.

AUDIO CHARACTERISTICS — Response: ± 3 db, 200 to 3,000 cps. Noise and hum: 40 db or more below reference output level.

Input: .01 volts for rated power output.

DISTORTION — SSB, 3rd order products approximately 35 db down at 1 kw PEP.

MICROPHONE INPUT — Will match high impedance dynamic or crystal.

PHONE PATCH IMPEDANCE — 600 ohms, unbalanced to ground.

CIRCUIT PROTECTION — Overload relay and fuses.

WEIGHT — 210 pounds.

SIZE — 40 1/2" high, 17 1/4" wide, 15 1/2" deep.

RACK MOUNTING — Angle brackets kits available for RF Unit and power supply.

TUNING CONTROLS — Bandswitching, frequency selector, PA tuning, PA loading.

OTHER CONTROLS — Filament power, plate power, filament adjust, tune-operate, multimeter switch, VOX speaker gain, VOX speech gain, band change, audio gain, sideband select, emission selector, dial lock, zero set, ALC adjust.

ACCESSORIES REQUIRED — High impedance microphone, telegraph key, 52 ohm antenna.

POWER SOURCE — 230 v, 3 wire, 50/60 cycle, single phase, grounded neutral; or 115 v, 2 wire, 50/60 cycle, single phase. 1500 W 1 kw input CW.

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COLLINS 75A-4 RECEIVER

Designed expressly for Amateur operation on the seven HF bands. The time-proven features of earlier 75A models are retained — excellent image rejection, precise dial calibration and high stability, hermetically sealed Collins VFO and crystal-controlled first injection oscillator. Collins Mechanical Filter in the i-f strip provides ideal selectivity. And the new 75A-4 gives you the best SSB reception plus conventional CW and AM operation.

75A-4 SPECIFICATIONS

FREQUENCY RANGE — 160, 80, 40, 20, 15, 11, 10 meters — 1.5 to 30 mc.
SIZE — 10½" high, 17¼" wide, 15½" deep.
WEIGHT — 35 pounds.
RACK MOUNTING — Angle mounting kit available.
NUMBER OF TUBES — 22, including rectifiers.
SENSITIVITY — 1.0 microvolt or 6 db signal-to-noise ratio with 3 kc bandwidth.
AVC CHARACTERISTICS — Audio rise less than 3 db for inputs of 5 to 200,000 uv.
AVC TIME CONSTANTS — Rise Time — .01 second. Release Time — .1 second (fast), 1 second (slow).
IMAGE AND I-F REJECTION — Image ratio at center of each band 50 db or better. I-f rejection at center of each band 70 db or better.
AUDIO CHARACTERISTICS — Output — .75 watts with a 3.0 uv signal, 30% modulated. Output impedance — 500 ohms, 4 ohms. Response of audio circuits — ±3 db 100 cps to 5,000 cps. Distortion — less than 10%.
MUTING — Provisions for muting the Receiver during key-down operation is provided. A muting voltage of +20 volts must be supplied by transmitter.
FREQUENCY STABILITY (at 14 mc) — Temperature — Less than 1200 cycles drift from 0 to ±60° C. Warm-up drift — Less than 300 cycles after 15 minute operation. Line voltage coefficient — Less than 100 cycles for ±10% change. Dial Accuracy — 300 cycles after calibration.

KWS-1 AND 75A-4 ACCESSORIES

SPEAKER

The 270G-3 cabinet and 10" PM speaker assembly attractively finished to match the 75A-4 Receiver.

SPEAKER/CONTROL

The 312A-1 Speaker/Control Unit has space for the loudspeaker and extra control functions necessary in a complete installation. Unit is furnished with removable perforated steel front panel insert with no cut-outs; operator can remove panel and install any control functions such as beam direction indicators, clocks, switches, etc. A 10" speaker is submounted behind the front panel. Rear of the unit is open and across the bottom is a terminal strip.

MECHANICAL FILTERS

Collins new type F455J-Series Mechanical Filters are available as accessories for the 75A-4 Receiver. The F455J-08 Filter, bandwidth of 800 cycles, is recommended for CW reception. The F455J-31, 3.1 kc, is supplied with Receiver for AM and SSB, and the F455J-60, providing a 6.0 kc bandwidth is recommended for AM reception where interference is not a problem. The F455J-15, 1.5 kc bandwidth, is recommended for RTTY.

LOW PASS FILTER

Collins 35C-2 is a 52-ohm three-section low pass filter with approximately 0.2 db insertion loss below 29.7 mc and approximately 75 db attenuation of harmonic emissions at TV frequencies.

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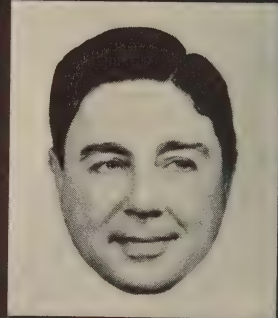


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Mechanical and Thermal Stability

Highly stable components and construction prevent frequency shift or drift.

Structural Rigidity and Strength

Heavy steel chassis, cast aluminum panel and rugged steel cabinet assure stable, long-life service.

This completely new receiver includes many deluxe features usually found only in higher priced models. It provides injection control of the beat frequency oscillator. Particularly useful for CW and SSB reception.

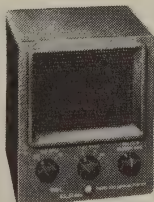
Large, evenly graduated, illuminated dial covers all six amateur bands from 1.76 mc to 29.8 mc (160 thru 10 meters). Unique differential 75:1 or 1:1 ratio tuning control. Plates in tuning condenser are triple-spaced to reduce drift and microphonics. Selectivity control with four positions. IF curve is 2.8 kc wide without crystal filter, attenuation 60 db down at 7 kc above or below the desired frequency. Crystal filter has phasing control for variable rejection of unwanted adjacent signals. Excellent image rejection. High sensitivity of 2 microvolts for 10 db signal-to-noise ratio. Temperature-compensated. Drift is negligible after 20-minute warm-up. Extreme stability permits single sideband reception with or without adapter. ANL. Antenna trimmer permits peak adjustment. 4-position function switch. Two coaxial jacks for SSB adapter. 4-ohm speaker terminals. Transmitter relay control.

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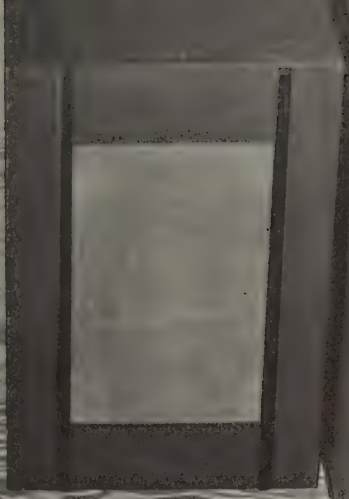
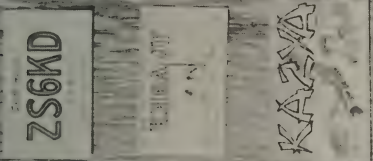
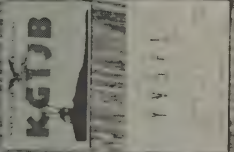
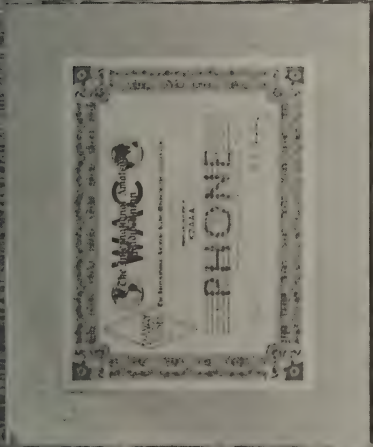
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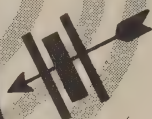
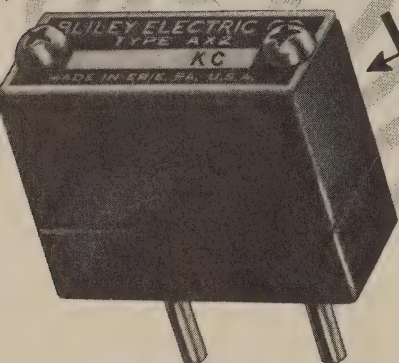
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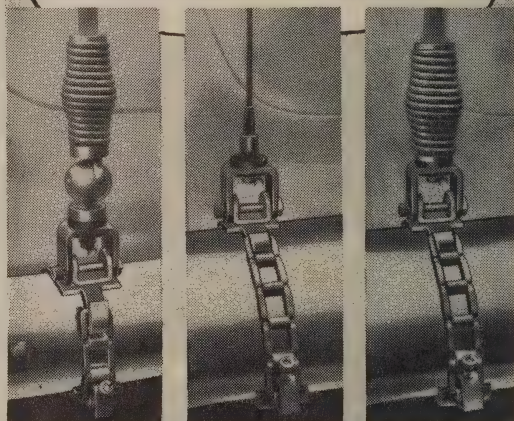
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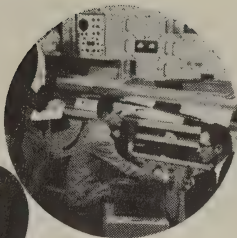
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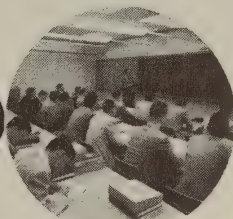
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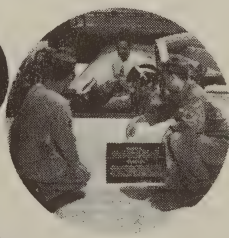
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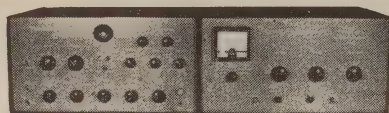
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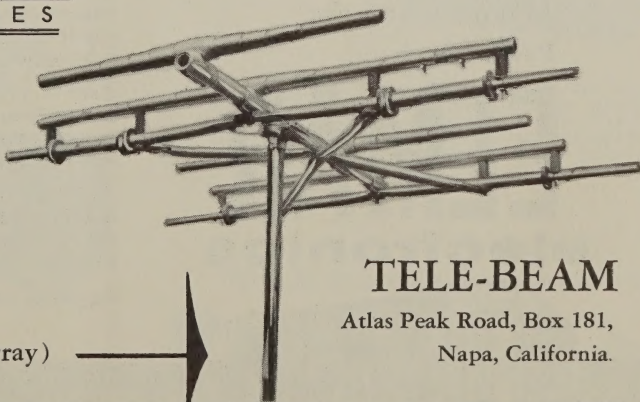
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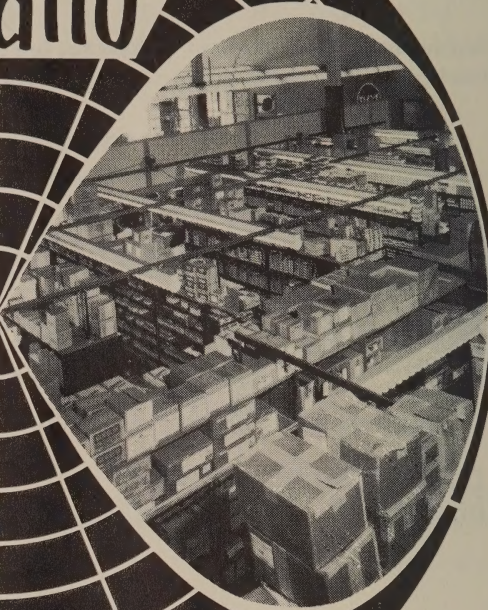
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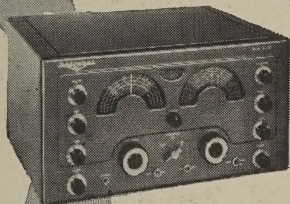
NC-300

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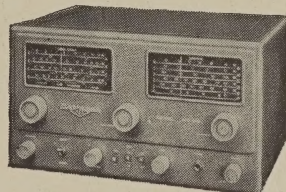
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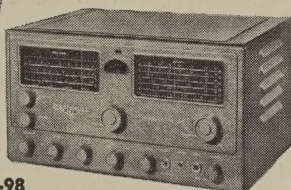
NC-183D

Has dual conversion above 4.4 mcs ... steep-sided skirt selectivity with 3 IF stages (16 tuned circuits on the 3 high bands—12 on all other bands) plus a new crystal filter. Approximately 1 microvolt sensitivity on 6 meters for a 10db signal-to-noise ratio! Frequency range: .54 mcs to 31 mcs plus 47-55 mcs.



NC-88

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NC-98

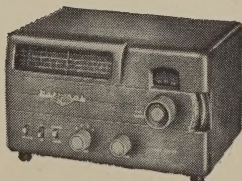
The lowest priced receiver with a crystal filter, the NC-98 has calibrated bandsread for 80, 40, 20, 15, 11 and 10 meter bands ... Advanced A. C. superhet circuit uses 8 high gain miniature tubes plus rectifier ... covers 540 kcs to 40 mcs in 4 bands ... tuned RF stage ... two IF stages and 2 audio stages with phono input and two position tone control. ALSO, antenna trimmer, separate high frequency oscillator, sensitivity control, series valve noise limiter, delayed A. V. C., headphone jack, standby-receive switch. Available with a calibrated bandsread scale for the SWL bands.



NC-125

Frequency range: .56 to 35 mcs. Has built-in SELECT-O-JECT audio filter. Average sensitivity 3 microvolts for 10 db signal to noise ratio. Has AVC, noise limiter, voltage regulated stabilized oscillator. Audio system essentially flat to 10,000 cps. Provision for NFM Adaptor.

SW-54



The most astonishing little receiver on the market today! Covers broadcast and 3 shortwave bands—540 kcs to 30 mcs. Receives voice or code. Police, ship, amateur, foreign stations clearly marked. Uses new miniature tubes for improved sensitivity. Easy-to-read indirectly lighted scale. Accurate "logging scale" also provided. Provision for headphones. Send-Receive switch for "ham" use with transmitter. Measures only 11" x 7". AC-DC operation.

Write for National's New Receiver Catalog.

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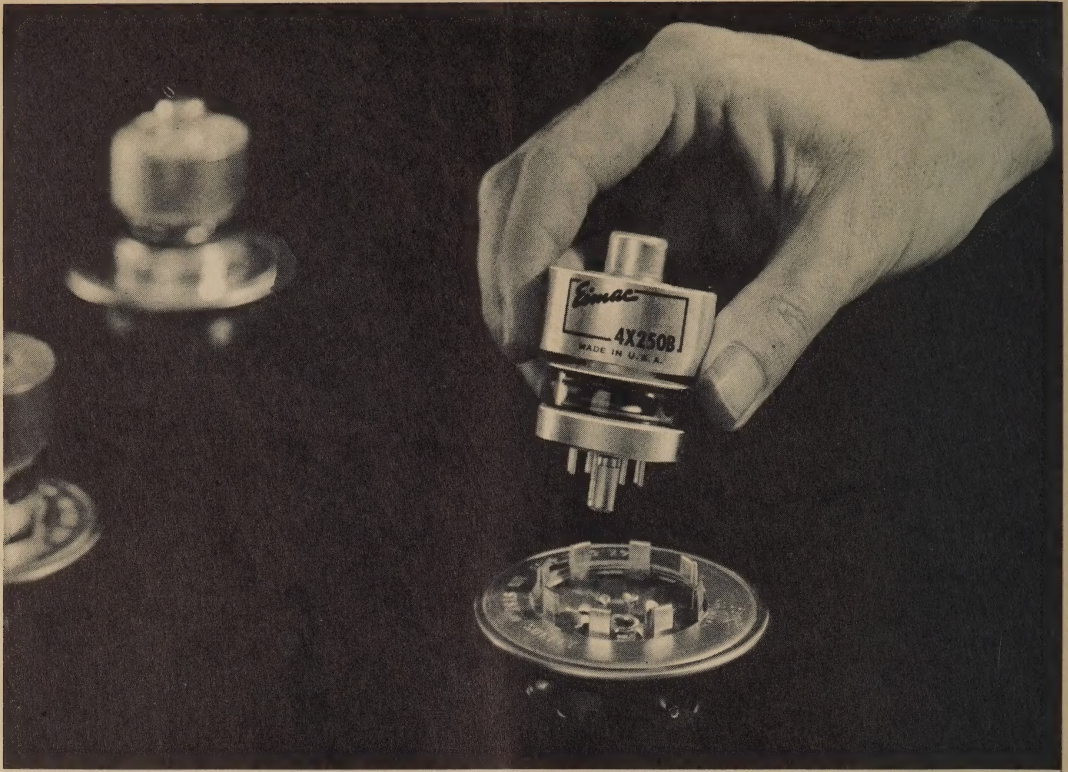


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62 SHERMAN STREET, MALDEN 48, MASSACHUSETTS

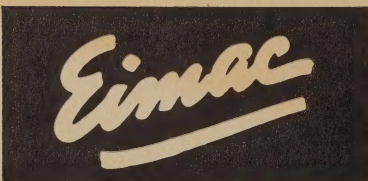


Eimac 4X250B and air-system socket — the easy approach to a modern transmitter

SSB, AM or CW, the ideal combination for the modern high power, all-band amateur transmitter is the new Eimac 4X250B radial-beam power tetrode and Eimac air-system socket. With an Eimac air-system socket, full stabilization and cooling advantages of the 4X250B are realized. A high quality, minimum inductance, silver mica screen grid by-pass capacitor is a built-in feature of the socket. This custom-made socket, together with the inherent low inter-electrode capacitances of the 4X250B, make stabilization of the amplifier stage easy. Additional circuit simplicity is possible through the low driving requirements, enabling the

use of standard receiver-type tubes in low level stages, permitting easy filtering of TVI producing harmonics. A pair of 4X250B's in modern, compact space-saving equipment permit a kilowatt input in SSB or CW operation. A new integral-finned anode minimizes the forced-air cooler requirements of the 4X250B. In fact, during stand-by periods no blower is necessary if convection air is properly provided. For ease of design, transmitter versatility and on-the-air reliability, investigate the incomparable combination of an Eimac 4X250B and air-system socket.

The 4X250B is unilaterally interchangeable, in nearly all cases, with the famous 4X150A. For further information and a free copy of the 20 page Application Bulletin No. 9, "Single Sideband" visit our exhibit at the National Convention, Booths 16 and 17.



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